



Commonwealth of Virginia

COPY

DEPARTMENT OF FORENSIC SCIENCE

CERTIFICATE OF ANALYSIS

Central Laboratory
700 N. 5th Street
Richmond, VA 23219

February 17, 2021

Tel. No.: (804) 786-4707
Fax: (804) 786-6907

TO: JUSTIN COWAN
DEPARTMENT OF STATE POLICE
2434 PINE FOREST DRIVE
COLONIAL HEIGHTS, VA 23834

FS Lab # C21-516

Your Case #: 21-533

Victim(s): HILL, Xzavier Devonte

Suspect(s): - - -

Evidence Submitted By: Jonathan W. Johnson

Date Received: 01/14/2021

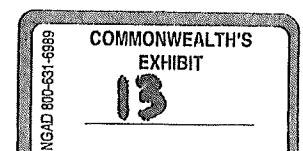
Item 1	One (1) SIG Sauer Model P320, caliber 357 SIG, pistol, serial number 58C295057, with one (1) magazine and twelve (12) Speer caliber 357 SIG cartridges
Item 2	One (1) SIG Sauer Model P320, caliber 357 SIG, pistol, serial number 58C273133, with one (1) magazine and fourteen (14) Speer caliber 357 SIG cartridges
Item 2T	Ammunition components from test firing the Item 2 firearm (Item created at the Central Laboratory)
Item 6	One (1) Speer caliber 357 SIG cartridge case
Item 7	One (1) Speer caliber 357 SIG cartridge case
Item 8	One (1) Speer caliber 357 SIG cartridge case
Item 9	One (1) Smith & Wesson Model SD40, caliber 40 S&W, pistol, serial number FCL1110, and one (1) Aguila caliber 40 S&W cartridge
Item 16	One (1) magazine and eight (8) Aguila caliber 40 S&W cartridges
Item 20	One (1) bullet
Item 21	One (1) bullet

RESULTS AND INTERPRETATIONS:

The Item 1 firearm was examined, found to be in mechanical operating condition with the safety features functioning properly, and test fired using the submitted magazine. The Item 1 cartridges were examined and found to be the type designed for use with the Item 1 firearm. Three (3) of the Item 1 cartridges were used for test firing purposes. The resultant ammunition components are being returned in Container 1 and should be maintained for possible future examinations.

The Item 7 and 8 cartridge cases and Item 21, consistent in design with a Speer caliber 357 SIG Gold Dot jacketed hollow-point bullet, were examined microscopically and identified as having been fired in/from the Item 1 pistol based on corresponding class and individual characteristics.

The Item 2 firearm was examined, found to be in mechanical operating condition with the safety features functioning properly, and test fired using the submitted magazine. The Item 2 cartridges were examined and found to be the type designed for use with the Item 2 firearm. Three (3) of the Item 2 cartridges and three (3) cartridges from laboratory stock ammunition were used for test firing purposes. The resultant ammunition components from laboratory stock ammunition are being returned as Item 2T. The resultant ammunition components are being returned in Container 2 and should be maintained for possible future examinations.





Commonwealth of Virginia

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DEPARTMENT OF FORENSIC SCIENCE

CERTIFICATE OF ANALYSIS

Department of State Police
FS Lab # C21-516
Your Case # 21-533
February 17, 2021

The Item 6 cartridge case and Item 20, consistent in design with a Speer caliber 357 SIG Gold Dot jacketed hollow-point bullet, were examined microscopically and identified as having been fired in/from the Item 2 pistol based on corresponding class and individual characteristics.

The Item 9 firearm was examined, found to be in mechanical operating condition with the safety features functioning properly, and test fired using the Item 16 magazine. The Item 9 and 16 cartridges were examined and found to be the type designed for use with the Item 9 firearm. Three (3) of the Item 16 cartridges were used for test firing purposes. The resultant ammunition components are being returned in Container 7 and should be maintained for possible future examinations.


The cartridge cases from test firing the Item 9 firearm were microscopically examined, one (1) of these cartridge cases was entered into the NIBIN system, and a search was conducted. No associations were made at this time; however, searches will be conducted periodically as new images are entered into the database.

Dates of testing: 1/28/2021 - 2/17/2021. Supporting examination documentation is maintained in the case file. The above listed methods are those approved for use at the time of analysis. Current methods can be found in the Firearms and Toolmarks Procedures Manual, which can be found at www.dfs.virginia.gov/documentation-publications/manuals/.

The evidence is being retained for personal pickup.

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results and interpretations of that analysis or examination.


James J. Bullock
Forensic Scientist

OCME (# C0021-21)

JJB
2/22/21

**DEPARTMENT OF HEALTH
OFFICE OF THE CHIEF MEDICAL EXAMINER
400 EAST JACKSON STREET
RICHMOND, VIRGINIA 23219**

Autopsy C0021-21
File# C2021-73266
Date/Day 01/11/2021 Monday
Time 09:00 a.m.

REPORT OF AUTOPSY

DECEDENT Xzavier

Hill

Autopsy Authorized by: Dr. Daniel Shapiro, Medical Examiner for Goochland County.

BODY IDENTIFIED BY: Removal service tag. **PERSONS PRESENT AT AUTOPSY:** Daniel Shapiro, M.D., Jeffery Goffin, M.D., and Aria Rowshan.
Rigor: Complete **Livor:** Pink **Distribution:** Posterior **Age:** 18 **Race:** Black **Sex:** Male **Length:** ~65" **Weight:** ~156 lbs.
Eyes: Brown **Hair:** Black **Mustache:** Yes **Beard:** Yes **Circumcised:** Yes **Body Heat:** Refrigerated.

CLOTHING, PERSONAL EFFECTS, EXTERNAL WOUNDS, SCARS, TATTOOS, OTHER IDENTIFYING FEATURES:

CLOTHING/PERSONAL EFFECTS: The body is received clothed in a t-shirt, shorts, shoes, and socks. Personal effects include a watch, two bracelets, two earrings, a necklace, and a rubber band.

EXTERNAL EXAMINATION: The decedent is a well-developed, well-nourished, adult male, who appears consistent with the stated age. There is no decomposition. The head is normocephalic with two abrasions at the left forehead, each measuring 0.5 cm x 0.2 cm, and a 6.0 cm x 2.0 cm left cheek contusion. The eyes are clear, with unremarkable conjunctivae. The left mandible is fractured, in addition to several mandibular teeth. The remaining dentition is natural and in a healthy state of repair. A gunshot wound is present at the left face, described below. The neck, chest, abdomen, and back are intact. A gunshot wound is present at the posterior neck, described below. A 5.0 cm x 2.0 cm contusion is present at the right lateral neck. A 2.5 cm x 1.0 cm contusion is present at the anterior neck. A 4.0 cm x 1.0 cm contusion is present at the right clavicle. A 3.0 cm x 2.0 cm contusion is present over the left clavicle. Three patterned abrasions are present over the anterior neck, measuring 1.0 cm x 0.2 cm, 3.0 cm x 0.3-0.1 cm, and 1.2 cm x 0.2 cm. A 2.5 cm x 1.0 cm contusion is present at the left upper chest. The arms, hands, legs, and feet are intact. At examination, the hands are covered with a white bag. The bags are removed and discarded per office protocol. There is blood smear on the hands. There is no visible soot on the hands. A gunshot wound is present at the left hand, described below. The left arm is remarkable for a 0.7 cm x 0.2 cm abrasion and a 2.0 cm x 0.5 cm contusion at the left hand. The right arm and lower extremities are atraumatic.

MARKS OF THERAPY: None.

SIGNS OF ORGAN DONATION: None.

SCARS: Well-healed scars of the right shoulder, upper extremity, and left lower extremity.

TATTOOS: As per autopsy photographs.

X-RAYS: Skeletal survey reveals a projectile at the left maxillary region and right clavicular region.

HISTORY: Shot by law enforcement following a police pursuit. Pronounced dead on scene.

PATHOLOGICAL DIAGNOSES:

1. Penetrating, indeterminate range gunshot wound to the posterior neck (A), centered 6" from the top of the head, 0.75" left of posterior midline. The entrance wound consists of a 1.5 cm x 0.7 cm, round defect, with a 0.1 cm circumferential abrasion margin. There is no soot or stippling on the surrounding skin surface. The trajectory is forward and slightly rightward. A 1.5 cm x 1.5 cm, deformed, jacketed projectile is located within the maxillary sinus and submitted as evidence. The wound path involves the C1 and C2 vertebrae (fractured), partial transection of the spinal cord, pharyngeal soft tissues, maxillary sinus where the projectile terminates its path.
2. Penetrating, indeterminate range gunshot wound to the left face (F), centered 5.5" from the top of the head, 5" left of anterior midline. The entrance wound consists of a 2.0 cm x 1.0 cm, ovoid defect, with a 0.2 cm laceration at the 5 o'clock position, a 0.5 cm laceration at the 6 o'clock position, and an abrasion margin, measuring 0.1 cm thick between the 9 o'clock to 3 o'clock positions. There is no soot or stippling on the surrounding skin surface. The trajectory is to the right and downward. A 0.8 cm x 0.5 cm, jacketed, deformed projectile is recovered from the right clavicle, 14" from the top of the head, 1" right of anterior midline, and is submitted as evidence. The wound path involves fracture of the left mandible and associated teeth, and injury to the pharyngeal soft tissues, thyrohyoid muscle, sternothyroid muscle, and right clavicle, where the bullet terminates its path. Associated subcutaneous hemorrhage and contusions at the anterior neck.

Cause of Death: Gunshot wound to neck.

Final Report: February 11, 2021

The facts stated herein are true and correct to the best of my knowledge and belief.

02/12/2021
Date Signed

Richmond City
Place of Autopsy

Daniel Shapiro
Signature of Pathologist
Daniel Shapiro, M.D.

Autopsy C0021-21
 File# C2021-73266
 Date/Day 01/11/2021, Monday
 Time 09:00 a.m.

REPORT OF AUTOPSY # C0021-21
 Page 2

DECEDENT Xzavier

Hill

3. Perforating, indeterminate range gunshot wound to the left hand, with entrance (E) adjacent to the base of the thumb, centered 23.5" from the top of the shoulder and 2.25" left of posterior midline of the arm. The entrance wound consists of a 0.8 cm x 0.8 cm, round defect. There is no soot or stippling on the surrounding skin surface. The trajectory is dorsal to ventral, lateral to medial, and slightly distal. An exit wound is present at the palmar surface of the left hand (B). The exit wound consists of a 2.5 cm x 1.0 cm defect, 24" from the top of the shoulder and 2.5" left of anterior midline, with three lacerations (0.6 cm, 0.5 cm, and 0.5 cm) at the 3 o'clock to 7 o'clock position. A re-entrance wound (C) is present at the palmar surface of the left hand, 25" from the top of the shoulder, 0.5" right of anterior midline. The re-entrance wound consists of a 3.2 cm x 1.3 cm, irregular defect with a 1 cm laceration at the 12 o'clock position. A re-exit wound (D), is present at the left medial aspect of the fourth digit, consisting of a 2.0 cm x 0.7 cm, irregular defect, situated 25.5" from the top of the shoulder and 1" right of anterior midline. There are no recoverable projectile fragments. The wound path is associated with fracture of the left fourth proximal phalange.
4. Additional findings.
 - a. Pulmonary vascular congestion, mild.
 - b. Accessory spleen.
5. Toxicology findings.
 - a. 11-Hydroxy Delta-9 THC- 6.1 ng/mL (iliac blood).
 - b. Delta-9 Carboxy THC- 120 ng/mL (iliac blood).
 - c. Delta-9 THC- 21 ng/mL (iliac blood).

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DS

REPORT OF AUTOPSY # C0021-20

Page 3

GROSS DESCRIPTION

SEROUS CAVITIES: The pleural and pericardial spaces are intact and without abnormal fluid collections. The abdominal cavity is predominately smooth without adhesions or abnormal fluid collections. The organs are in their usual anatomic locations.

HEART: The heart weighs 417 grams. The epicardial surface is smooth, glistening, and intact. There is no atherosclerosis. The coronary arteries arise distribute normally. The valves are normally formed and within normal limits. The myocardium is diffusely maroon, intact, and without hemorrhage, necrosis, or scar. The left ventricle, septum, and right ventricle measure 1.3 cm, 1.5 cm, and 0.5 cm, respectively.

AORTA: The aorta arises and distributes normally. There is no atherosclerosis throughout the aorta.

NECK ORGANS: Hemorrhage is present at the thyrohyoid and sternothyroid muscles, associated with a gunshot wound track. The hyoid bone and laryngeal cartilages are intact and without injury. The thyroid gland is symmetric and without focal lesions.

LUNGS: The right lung weighs 422 grams, while the left is 325 grams. The upper airways are intact and contain a scant amount of mucus. The pleural surfaces are smooth and intact with reticular anthracosis. The parenchyma is moderately congested with minimal edematous fluid. There are no mucus plugs. The pulmonary vasculature is free of thromboembolus.

LYMPH NODES: Within normal limits.

LIVER: 1,363 grams. Intact capsule covering a maroon parenchyma. The cut surfaces show no focal lesions.

GALLBLADDER: The gallbladder is present and contains approximately 10 mL of bile. There are no stones or mucosal lesions.

SPLEEN: 115 grams. The capsule is intact. The parenchyma is maroon and without focal lesions. A 1.5 cm x 0.5 cm accessory spleen is adjacent to the spleen.

PANCREAS: Tan, lobulated, and intact without focal lesions.

ADRENAL GLANDS: Intact and without hemorrhage.

GI TRACT: Tongue is intact and shows no injury. Esophagus is intact and shows no mucosal lesions. The stomach is of the usual configuration and contains scant brown chyme. There are no pills or fragments seen. The small and large bowels are intact and without injuries. The appendix is present and unremarkable.

KIDNEYS: The right is 124 grams, while the left kidney is 112 grams. The capsules strip with ease to reveal regular, smooth contours. The renal parenchyma is red-maroon with no focal lesions. The pelves and ureters are intact and without obstruction.

BLADDER: The bladder contains approximately 50 cc of clear, yellow urine. The mucosa is intact and without lesions.

GENTALIA: Internal genitalia are intact and without injury.

BRAIN & MENINGES: The brain weighs 1,483 grams. The dura mater is intact. No evidence of epidural, subdural, or subarachnoid hemorrhages. The leptomeninges are thin and delicate. Serial coronal sections through the cerebral hemispheres demonstrate no evidence of intraparenchymal hemorrhage or focal lesions. The lateral ventricles are of the usual caliber. Serial transverse sections through the brainstem and cerebellum are unremarkable. The spinal cord at the level of the C1 and C2 vertebrae is partially transected, and hemorrhagic. Intraventricular hemorrhage is not present. There is no fluid in the sphenoid sinuses. There is no significant atherosclerosis present in the Circle of Willis.

MUSCULOSKELETAL: Fractures of the left fourth proximal phalange, C1 and C2 vertebrae, and left mandible. No additional bone or joint abnormalities are seen. Skeletal muscle is red-maroon and moist with a mass appropriate for the decedent's age and sex.

MICROSCOPIC SECTIONS: Heart, lung, liver, kidney.

OTHER LAB PROCEDURES: Photo ☒ Micro ☒ Toxicology ☒ X-Ray ☒ Fingerprints ☒ Dental ☐ DNA ☒ GSR ☒
 PERK ☐ HIV ☐ Hepatitis ☐ Bacteriology ☐ Virology ☐ Accelerants ☐ Other ☐

DISPOSITION OF EVIDENCE:

TOXICOLOGY (NMS) – Blood.
OCME – Vitreous, blood, liver, bile, urine.
INVESTIGATOR – Projectiles, DNA card, GSR kit, clothing and personal effects.
FUNERAL HOME – None.

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REPORT OF AUTOPSY # C0021-20
Page 4

MICROSCOPIC DESCRIPTION:

HEART: No significant histopathologic abnormality.

LUNG: Mild pulmonary vascular congestion, intra-alveolar and bronchial erythrocyte accumulation (hemoaspiration), and mild alveolar macrophage accumulation.

LIVER: No significant histopathologic abnormality.

KIDNEY: No significant histopathologic abnormality.

SUMMARY:

The decedent was an 18-year-old male who was involved in a vehicular pursuit with police and was subsequently shot during the incident. He was pronounced dead at the scene.

The examination showed gunshot wounds involving the face, neck and left hand. The gunshot wound to the neck was associated with lethal injury. There was no significant natural disease.

Postmortem toxicology revealed metabolites of marijuana and nicotine, which did not contribute to death.

CAUSE OF DEATH:

Gunshot wound to the neck.

MANNER OF DEATH:

Homicide.

d
21

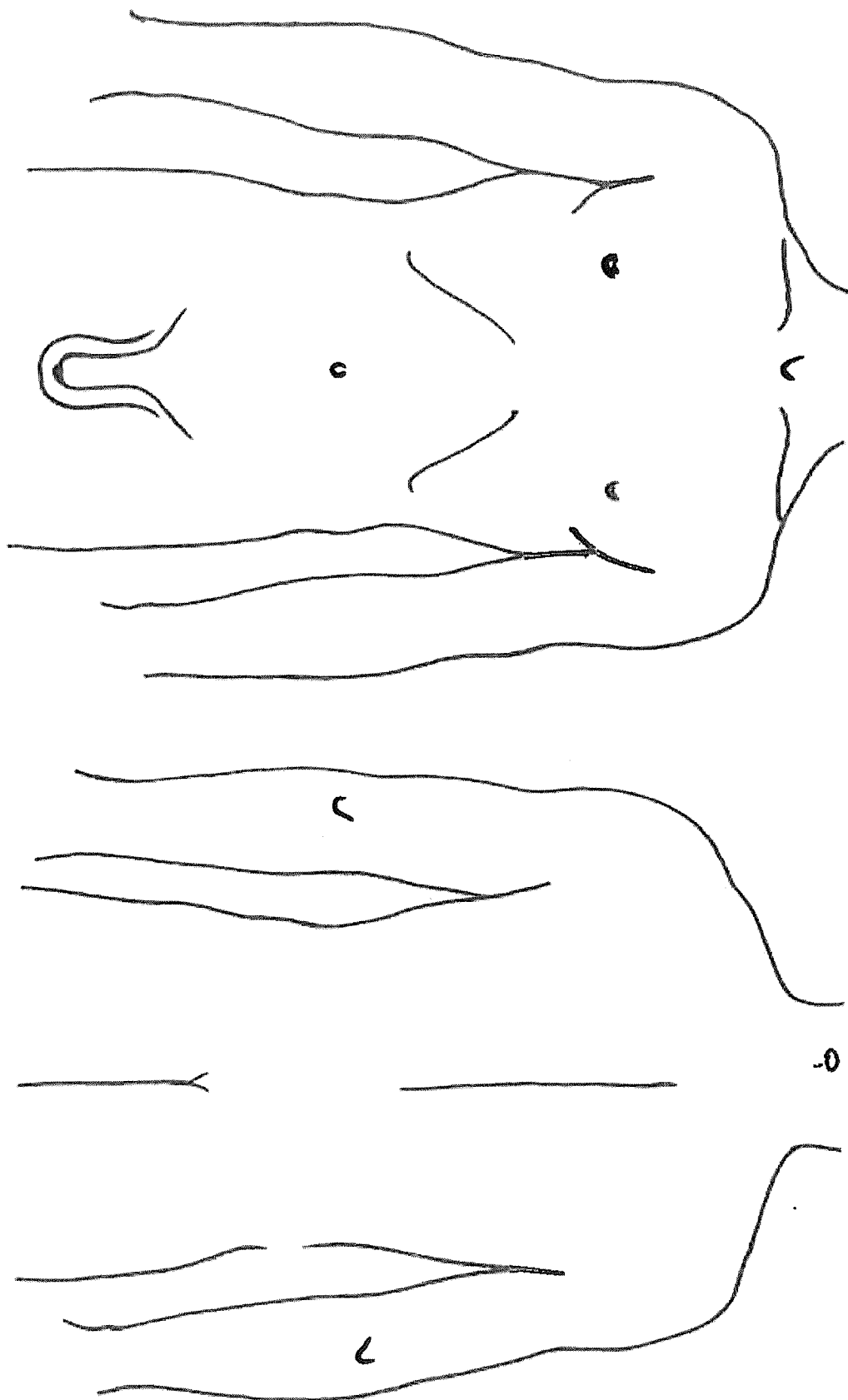


Exhibit # 6 "Thoracic, 3/4" L. H. H. 0.1 cm Abdominal region (4/2 cm H. H. H.)

Thoracic abdominal, male, anterior and posterior views.

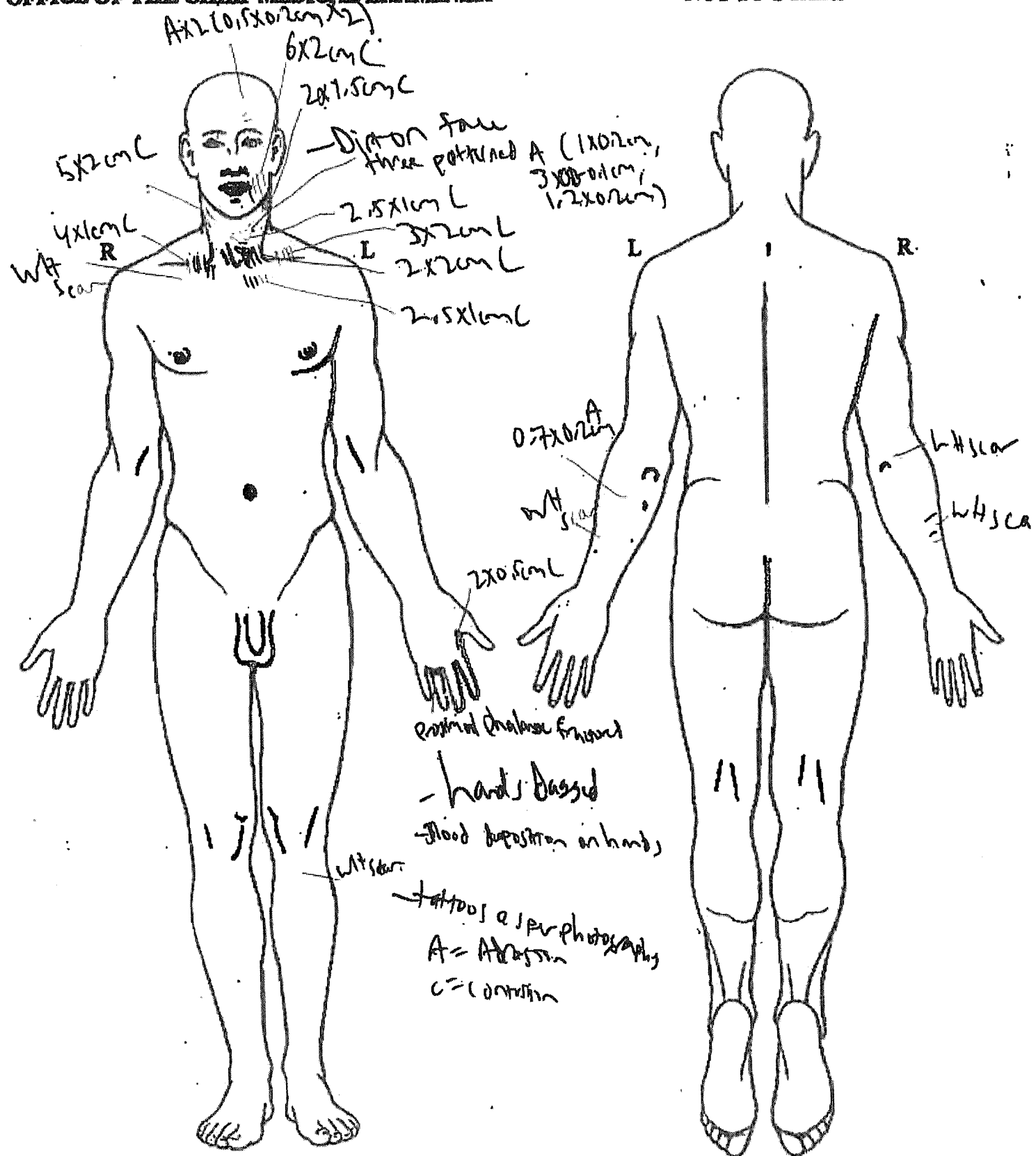
Name — C0021-21 JANUARY 11, 2021
 — XZAVIER HILL
 — VSP-GOOCHLAND
 Age — C2021-73266 DS/JG

Date / /

Autopsy No. _____

**COMMONWEALTH OF VIRGINIA
OFFICE OF THE CHIEF MEDICAL EXAMINER**

NOT TO SCALE



C0021-21 JANUARY 11, 2021

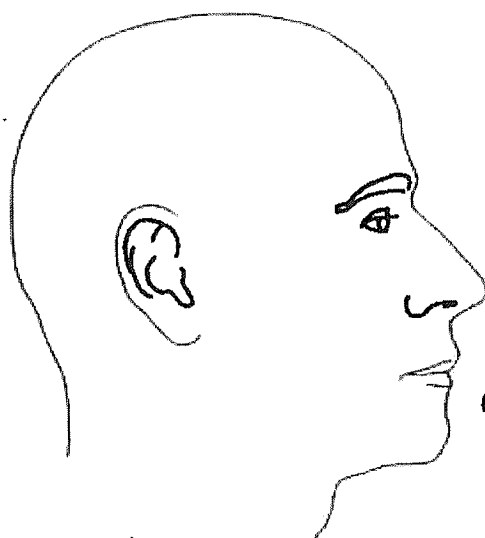
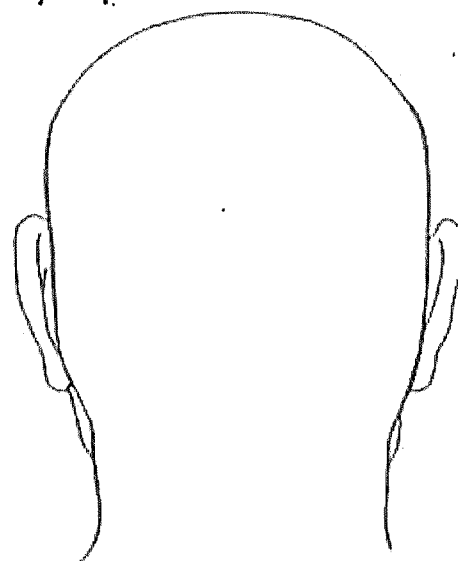
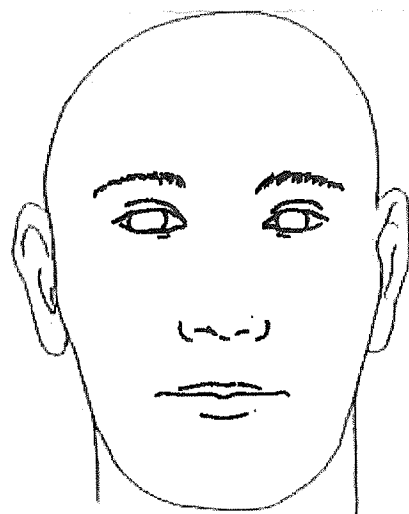
Name — XZAVIER HILL

Autopsy No. _____

VSP-GOOCHLAND

Age — C2021-73266 DS/JG

Date / /



F Entrance

5.5" FTH
5" LAM

2x1cm void

0.2cm @

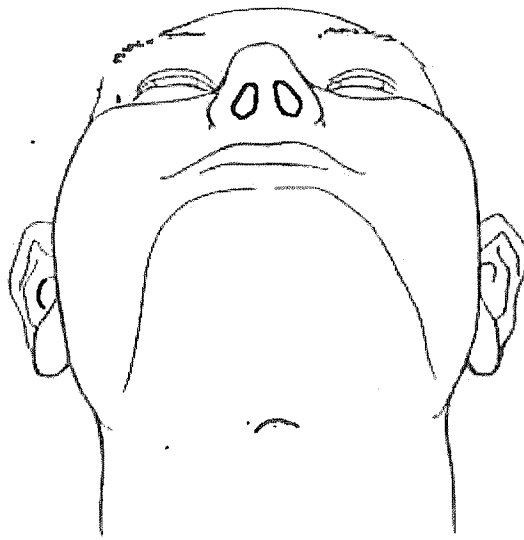
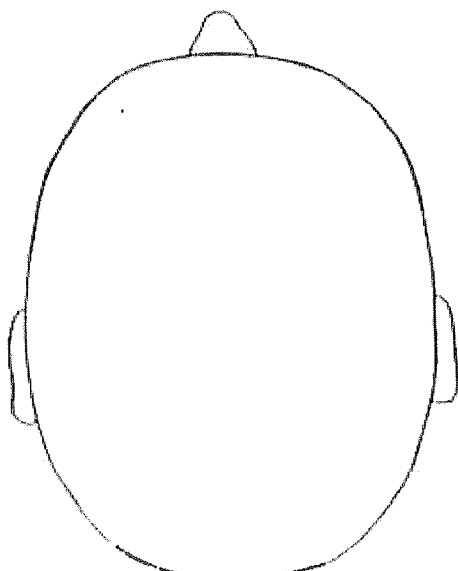
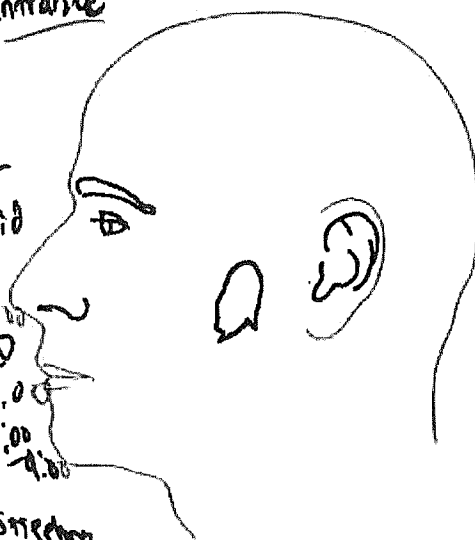
0.5cm @

circum A = 0.1cm

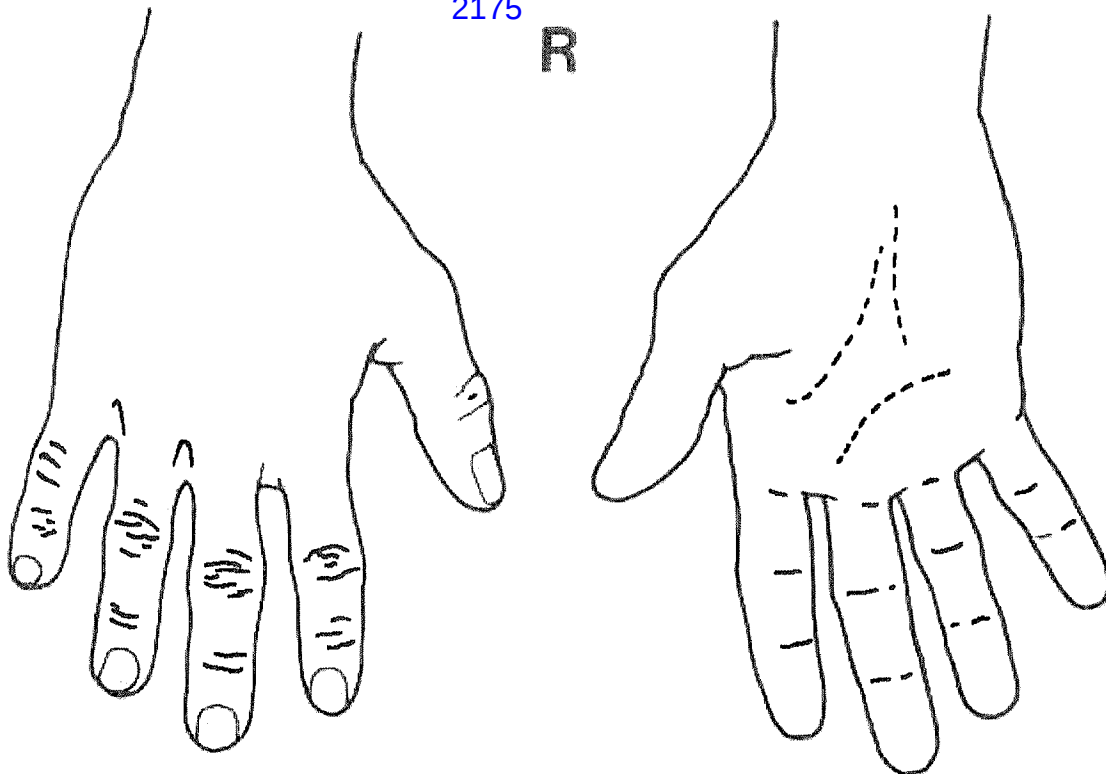
5:00
6:00
7:00
8:00

No soot or staining

An A. Brown

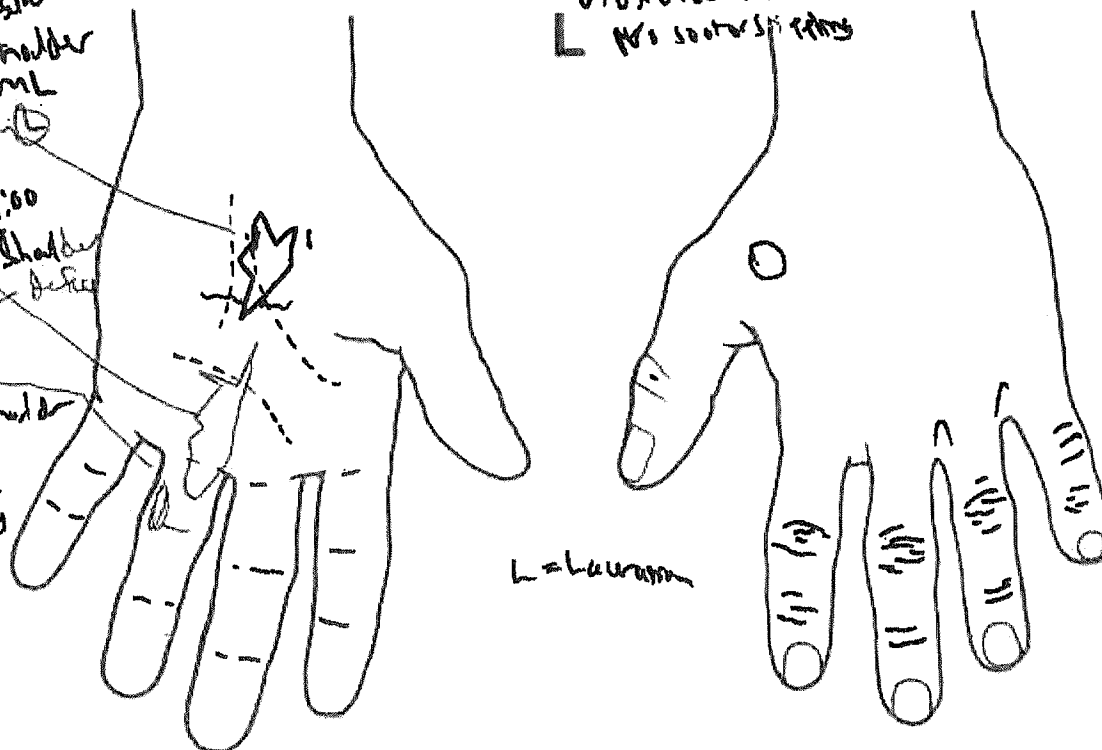


R

Entran - E

23.5" FTD shoulder 2.25" L PML
 0.8x0.8cm round defect
 L No suture or staples

B Exit
 2.5x1cm vertical defect
 24" FTD shoulder
 0.25" L PML
 0.6cm, 0.8cm
 @ 5:00
 @ 7:00
 @ 3:00
 Frequent
 2.5" FTD shoulder
 3.2x1.3cm irregular defect
 0.5" PML
 @ 12:00
 1x-ext D
 25.5" FTD shoulder
 1" PML
 2x0.7cm irregular defect



L = Laceration

C0021-21 JANUARY 11, 2021

Decedent's Name ZAVIER HILL

VSP-GOOCHLAND

Examined By C2021-73266 DS/JG

Decedent is
NON-RESIDENT
of City/ County of Death

Commonwealth of Virginia
Department of Health
Office of the Chief Medical Examiner
CENTRAL DISTRICT
400 EAST JACKSON STREET RICHMOND, VA 23219

Case Number:
C2021-73208

REPORT OF INVESTIGATION

Decedent **XZAVIER DEYONTE HILL**
First Name Middle Name Last Name Suffix Sr, Jr, III, etc
SSN **230-93-4898**
Home Address **12563 SUMMIT MANOR DRIVE APT#519 FAIRFAX, VA 22033**
Number and Street City, State, Zip
Age **18 Yrs** DOB **6/12/2002** Sex **MALE** Last Known Occupation **LIFEGUARD**
Race **BLACK** Hispanic? **NO** Marital Status **NEVER MARRIED**
MEDICAL EXAMINER AUTHORITY **VIOLENT OR UNNATURAL**
Police Notified **YES** Investigator **SPECIAL AGENT COWAN** Phone _____
Jurisdiction **VIRGINIA STATE POLICE**

	DATE (MM/DD/YY)	TIME (24h)	LOCATION	CITY/ COUNTY	BY WHOM
LAST KNOWN ALIVE	1/9/2021	0456	I-64 WB 172.6 MILE MARKER	GOOCHLAND COUNTY, VA	POLICE
EVENT/ INJURY ACUTE HEMORRAGE	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	POLICE
FOUND	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	POLICE
DEATH/ PROVEN	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	GOOCHLAND EMS
EXAMINATION OF BODY	1/11/2021	0900	OFFICE OF THE CHIEF MEDICAL EXAMINER - CENTRAL DISTRICT	RICHMOND, VA	SHAPIRO, DANIEL
Cause of Death: GUNSHOT WOUND TO THE NECK			Autopsy (Y/N):	Y	
			Authorized by	ASSISTANT CHIEF MEDICAL EXAMINER	
			Pathologist	SHAPIRO, DANIEL	
			Autopsy No	C0021-21	
Manner of Death: HOMICIDE			Location	CENTRAL OCME	

This case was reviewed by:

23-Feb-2021 1616

Date/Time

JEFFERY GOFTON

Name of Assistant Chief Medical Examiner


Signature of Assistant Chief Medical Examiner

23-Feb-2021 1433

Date/Time

CARLETON, LESLIE

Name of Reviewing Medical Death Investigator

MEDICAL HISTORY

☒ none known ☐ alcoholism ☐ cirrhosis ☐ hepatitis ☐ drug abuse ☐ asthma ☐ bronchitis ☐ emphysema
☐ seizure disorder (cause) _____ ☐ cancer _____ ☐ diabetes ☐ hypertension ☐ atherosclerosis
☐ stroke ☐ psychiatric diagnosis (specify) _____ ☐ depression ☐ dementia (specify) _____
☐ recent trauma (specify) _____ ☐ hip fracture
☐ acute infections (specify) _____ ☐ HIV/AIDS ☐ COPD ☐ obesity ☐ tobacco
☐ other (specify): _____

Treating MD _____ Phone# _____

Hospitalizations (when/where)

Medications

Tox requested: YES

Summary of Circumstances:

The decedent was an 18-year-old male who was involved in a vehicular pursuit with police and was subsequently shot. He was pronounced dead on scene.

The examination showed gunshot wounds involving the face, neck and left hand. The gunshot wound to the neck was associated with lethal injury. There was no significant natural disease.

Postmortem toxicology revealed metabolites of marijuana and nicotine, which did not contribute to death.

Decedent: XZAVIER DEYONTE HILL

NMS**NMS Labs 2178****CONFIDENTIAL**

200 Welsh Road, Horsham, PA 19044-2208

Phone: (215) 867-4900 Fax: (215) 867-2872

e-mail: nms@nmlabs.com

Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

DS/ Jg

Toxicology Report

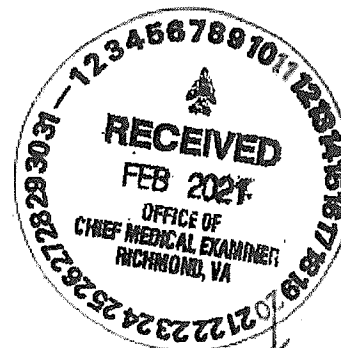
Report issued 01/30/2021 10:01

Patient Name HILL, XZAVIER
 Patient ID C2021-73286
 Chain 21014234
 Age 18 Y DOB 08/12/2002
 Gender Male
 Workorder 21014234

To: 10188
 Office of the Chief Medical Examiner-Central
 400 East Jackson Street

Richmond, VA 232193694

Page 1 of 3

**Positive Findings:**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>Matrix Source</u>
Cotinine	Positive	ng/mL	001 - Ilac Blood
11-Hydroxy Delta-9 THC	6.1	ng/mL	001 - Ilac Blood
Delta-9 Carboxy THC	120	ng/mL	001 - Ilac Blood
Delta-9 THC	21	ng/mL	001 - Ilac Blood

See Detailed Findings section for additional information

Testing Requested:

<u>Analysis Code</u>	<u>Description</u>
8052B	Postmortem, Expanded, Blood (Forensic)

Specimens Received:

<u>ID</u>	<u>Tube/Container</u>	<u>Volume/ Mass</u>	<u>Collection Date/Time</u>	<u>Matrix Source</u>	<u>Labeled As</u>
001	Clear Vial	14 mL	01/11/2021 10:00	Ilac Blood	C2021-73286
002	Clear Plastic Bag	Not Given	Not Given	Shipping Container	Not Applicable

All sample volumes/weights are approximations.

Specimens received on 01/13/2021.

NMS v.21.0

DS

NMS

CONFIDENTIAL

 Workorder 21014234
 Chain 21014234
 Patient ID C2021-73266

Page 2 of 3

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Cotinine	Positive	ng/mL	200	001 - Iliac Blood	LC/TOF-MS
11-Hydroxy Delta-9 THC	6.1	ng/mL	1.0	001 - Iliac Blood	LC-MS/MS
Delta-9 Carboxy THC	120	ng/mL	5.0	001 - Iliac Blood	LC-MS/MS
Delta-9 THC	21	ng/mL	0.50	001 - Iliac Blood	LC-MS/MS

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. 11-Hydroxy Delta-9 THC (Active Metabolite) - Iliac Blood:

11-Hydroxy Delta-9 THC is an active intermediate metabolite of tetrahydrocannabinol (THC) the active component of marijuana. Usual peak levels: Less than 10% of THC levels after smoking.

2. Cotinine (Nicotine Metabolite) - Iliac Blood:

Cotinine is a metabolite of nicotine and may be encountered in the fluids and tissues of an individual as a result of tobacco exposure.

Anabasine is a natural product occurring in tobacco, but not in pharmaceutical nicotine and a separate test for anabasine in urine can be used to distinguish tobacco from pharmaceutical nicotine use.

The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

3. Delta-9 Carboxy THC (Inactive Metabolite) - Iliac Blood:

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10 - 101 ng/mL attained 32 to 240 minutes after beginning smoking, with a slow decline thereafter. The ratio of whole blood concentration to plasma concentration is unknown for this analyte. THCC may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

4. Delta-9 THC (Active Ingredient of Marijuana) - Iliac Blood:

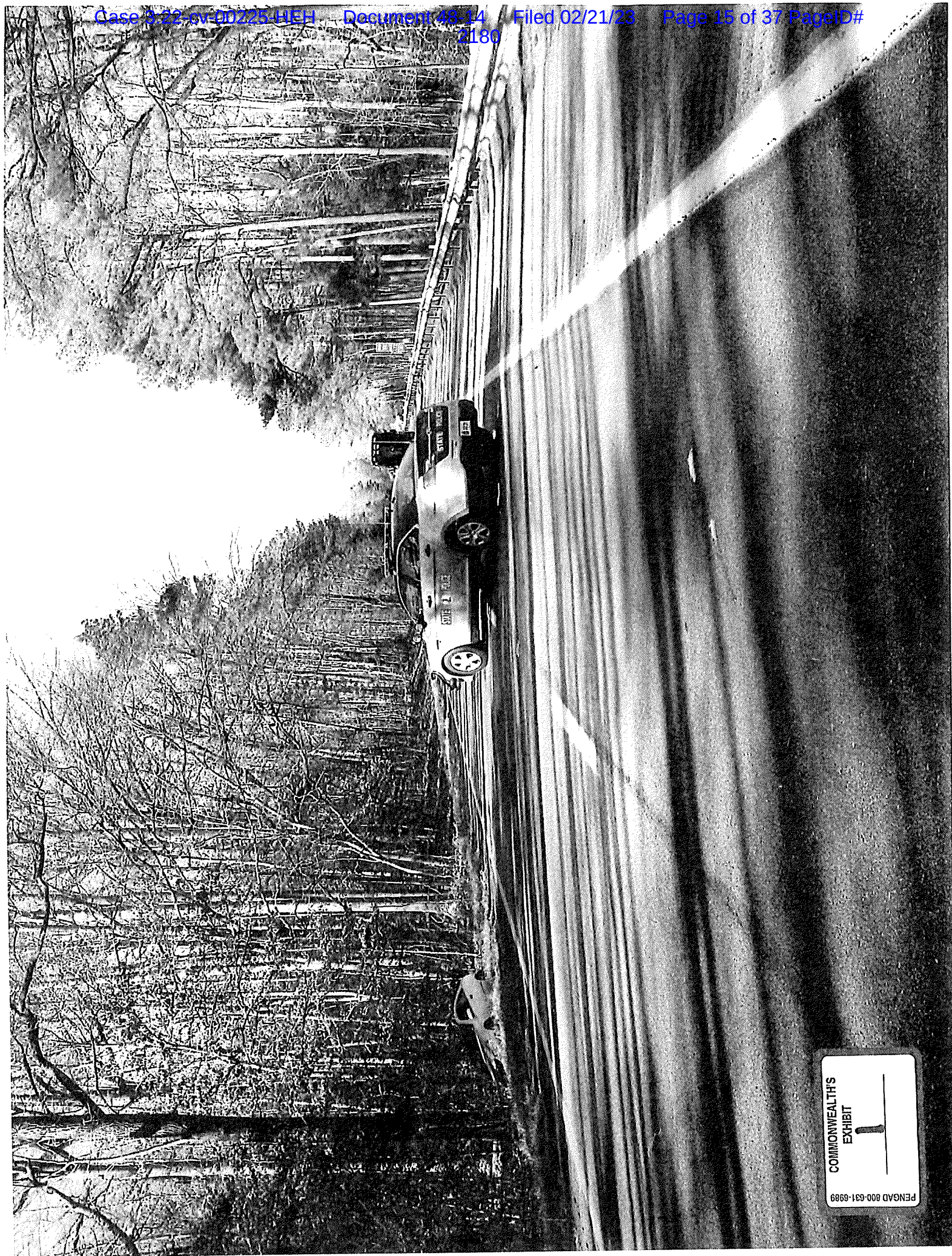
Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. It rapidly leaves the blood, even during smoking, falling to below detectable levels within several hours. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC and may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users.

THC concentrations in blood are usually about one-half of serum/plasma concentrations. Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50 - 270 ng/mL at 8 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) months from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

NMS v.21.0



COMMONWEALTH'S
EXHIBIT

1

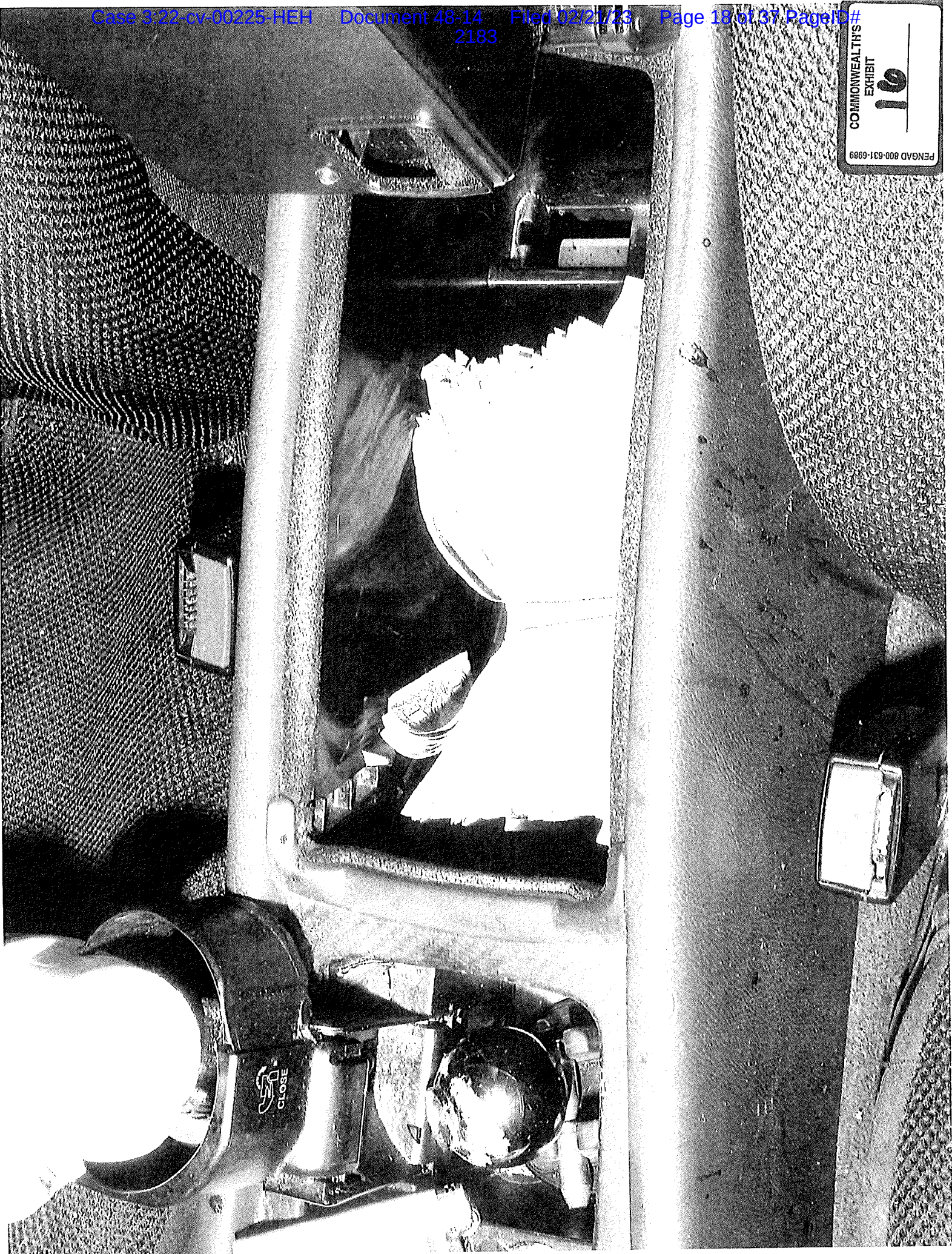
PENGAD 800-631-6999

COMMONWEALTH'S
EXHIBIT
14
PENGAD 800-631-6989





COMMONWEALTH'S
EXHIBIT
91
PENGAD 800-631-6989



COMMONWEALTH'S
EXHIBIT

17

PENGAD 800-631-6999





PENGAD 800-631-6969

COMMONWEALTH'S
EXHIBIT

18

COMMONWEALTH'S
EXHIBIT
b1
PENGAD 800-631-6989



PENGAD 800-631-5989

COMMONWEALTH'S

EXHIBIT

20

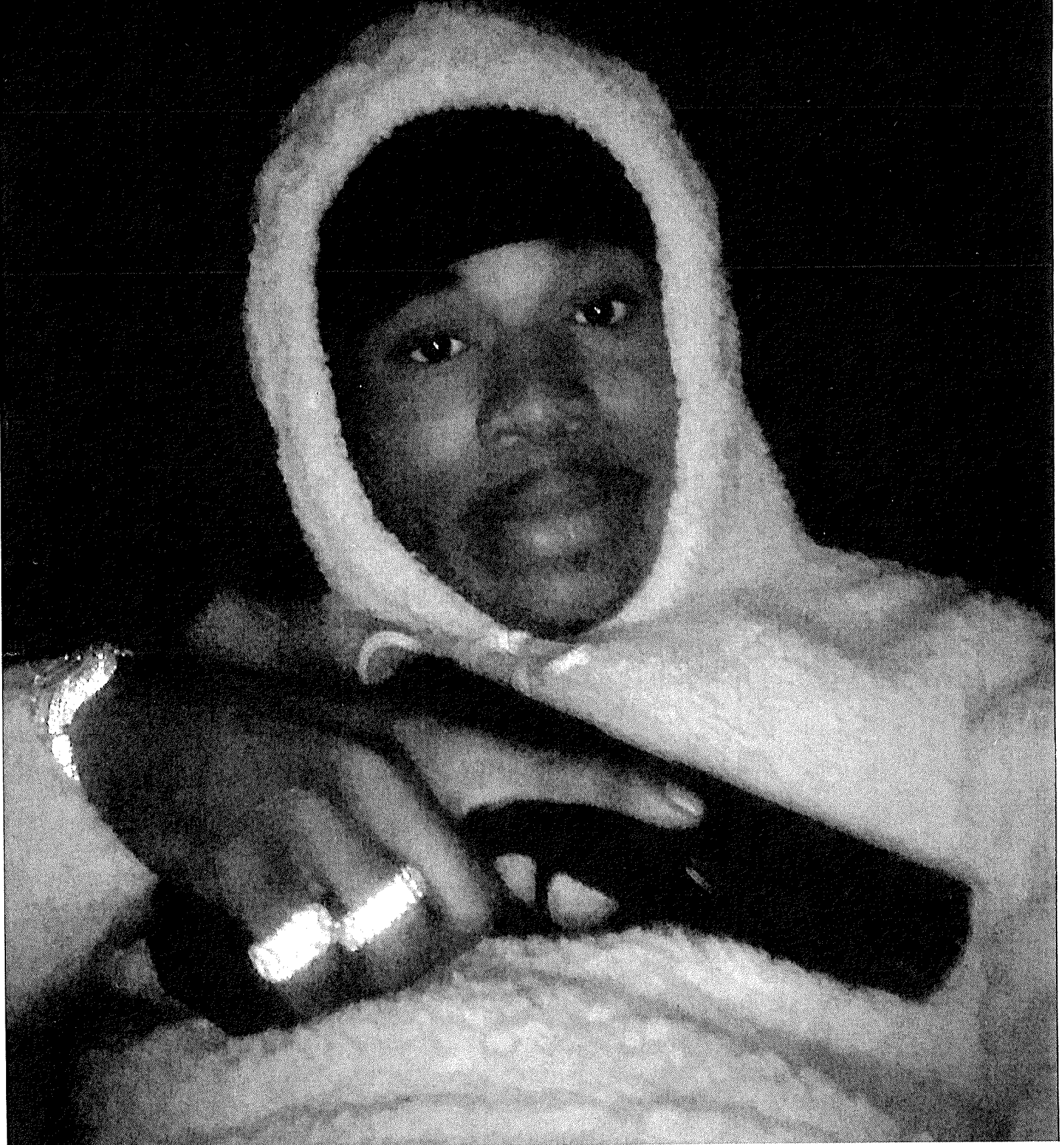


PENGAD 800-631-5688

COMMONWEALTH'S

EXHIBIT

21



**Cellebrite**

www.cellebrite.com

Extraction Report - Apple iOS Full File system

Searched Items (3)

#	Timestamp	Source	Value	Parameters	Origin	Deleted	Account
1	1/8/2021 2:16:32 PM(UTC-5)	Safari Source file: a061bfecd03a6c0232b7 e6a4cb579776a9718b0 5_files_partial- afu.zip/private/var/mobil e/Containers/Data/Applic ation/7AC5D39B-FA62- 44A7-9D3F- 4D25A095A910/Library/ Preferences/com.apple. mobilesafari.plist : 0x649 (Size: 4222 bytes)	check gun serial number		Default		
2	1/7/2021 2:45:35 PM(UTC-5)	Safari Source file: a061bfecd03a6c0232b7 e6a4cb579776a9718b0 5_files_partial- afu.zip/private/var/mobil e/Containers/Data/Applic ation/7AC5D39B-FA62- 44A7-9D3F- 4D25A095A910/Library/ Preferences/com.apple. mobilesafari.plist : 0x769 (Size: 4222 bytes)	smith and wesson SD40		Default		
3	1/6/2021 7:46:55 PM(UTC-5)	Safari Source file: a061bfecd03a6c0232b7 e6a4cb579776a9718b0 5_files_partial- afu.zip/private/var/mobil e/Containers/Data/Applic ation/7AC5D39B-FA62- 44A7-9D3F- 4D25A095A910/Library/ Preferences/com.apple. mobilesafari.plist : 0x844 (Size: 4222 bytes)	driving with lights off		Default		

County of Death

Commonwealth of Virginia
Department of Health
Office of the Chief Medical Examiner
CENTRAL DISTRICT
400 EAST JACKSON STREET RICHMOND, VA 23219

Case Number:
C2021-73266

REPORT OF INVESTIGATION

Decedent: XZAVIER DEYONTE HILL
First Name Middle Name Last Name Suffix Sr, Jr, III, etc
SSN _____
Home Address: 12563 SUMMIT MANOR DRIVE APT#519 FAIRFAX, VA 22033
Number and Street City, State, Zip
Age 18 Yrs DOB _____ Sex MALE Last Known Occupation LIFEGUARD
Race BLACK Hispanic? NO Marital Status NEVER MARRIED
MEDICAL EXAMINER AUTHORITY VIOLENT OR UNNATURAL
Police Notified YES Investigator SPECIAL AGENT COWAN Phone _____
Jurisdiction VIRGINIA STATE POLICE

	DATE (MM/DD/YY)	TIME (24h)	LOCATION	CITY/ COUNTY	BY WHOM
LAST KNOWN ALIVE	1/9/2021	0456	I-64 WB 172.6 MILE MARKER	GOOCHLAND COUNTY, VA	POLICE
EVENT/ INJURY ACUTE ILLNESS	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	POLICE
FOUND	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	POLICE
DEATH/ PROMINENT	1/9/2021	0456	I-64 WB MILE MARKER 172.6	GOOCHLAND COUNTY, VA	GOOCHLAND EMS
EXAMINATION OF BODY	1/11/2021	0900	OFFICE OF THE CHIEF MEDICAL EXAMINER - CENTRAL DISTRICT	RICHMOND, VA	SHAPIRO, DANIEL
Cause of Death: GUNSHOT WOUND TO THE NECK			Autopsy (Y/N): <u>Y</u>	Authorized by <u>ASSISTANT CHIEF MEDICAL EXAMINER</u>	
			Pathologist <u>SHAPIRO, DANIEL</u>		
			Autopsy No <u>C0021-21</u>		
Manner of Death: HOMICIDE			Location <u>CENTRAL OCME</u>		

This case was reviewed by:

23-Feb-2021 1619 JEFFERY GOFTON
Date/Time Name of Assistant Chief Medical Examiner

[Signature]
Signature of Assistant Chief Medical Examiner

23-Feb-2021 1433 CARLETON, LESLIE
Date/Time Name of Reviewing Medical Legal Death Investigator

MEDICAL HISTORY

- ☒ none known ☐ alcoholism ☐ cirrhosis ☐ hepatitis ☐ drug abuse ☐ asthma ☐ bronchitis ☐ emphysema
- ☐ seizure disorder (cause) _____ ☐ cancer _____ ☐ diabetes ☐ hypertension ☐ atherosclerosis
- ☐ stroke ☐ psychiatric diagnosis (specify) _____ ☐ depression ☐ dementia (specify) _____
- ☐ recent trauma (specify) _____ ☐ hip fracture
- ☐ acute infections (specify) _____ ☐ HIV/AIDS ☐ COPD ☐ obesity ☐ tobacco
- ☐ other (specify): _____

Treating MD _____ Phone# _____

Hospitalizations (when/where)

Medications

Tox requested: YES

Summary of Circumstances:

The decedent was an 18-year-old male who was involved in a vehicular pursuit with police and was subsequently shot. He was pronounced dead on scene.

The examination showed gunshot wounds involving the face, neck and left hand. The gunshot wound to the neck was associated with lethal injury. There was no significant natural disease.

Postmortem toxicology revealed metabolites of marijuana and nicotine, which did not contribute to death.

Decedent: XZAVIER DEYONTE HILL

DEPARTMENT OF HEALTH
OFFICE OF THE CHIEF MEDICAL EXAMINER
400 EAST JACKSON STREET
RICHMOND, VIRGINIA 23219

Autopsy C0021-21
File# C2021-73266
Date/Day 01/11/2021, Monday
Time 09:00 a.m.

REPORT OF AUTOPSY

DECEDENT Xzavier

Hill

Autopsy Authorized by: Dr. Daniel Shapiro, Medical Examiner for Goochland County.

BODY IDENTIFIED BY: PERSONS PRESENT AT AUTOPSY:
Removal service tag. Daniel Shapiro, M.D., Jeffery Goffon, M.D., and Aria Rowshan.
Rigor: Complete Livor: Pink Distribution: Posterior Age: 18 Race: Black Sex: Male Length: ~65" Weight: ~156 lbs.
Eyes: Brown Hair: Black Mustache: Yes Beard: Yes Circumcised: Yes Body Heat: Refrigerated.

CLOTHING, PERSONAL EFFECTS, EXTERNAL WOUNDS, SCARS, TATTOOS, OTHER IDENTIFYING FEATURES:

CLOTHING/PERSONAL EFFECTS: The body is received clothed in a t-shirt, shorts, shoes, and socks. Personal effects include a watch, two bracelets, two earrings, a necklace, and a rubber band.

EXTERNAL EXAMINATION: The decedent is a well-developed, well-nourished, adult male, who appears consistent with the stated age. There is no decomposition. The head is normocephalic with two abrasions at the left forehead, each measuring 0.5 cm x 0.2 cm, and a 6.0 cm x 2.0 cm left cheek contusion. The eyes are clear, with unremarkable conjunctivae. The left mandible is fractured, in addition to several mandibular teeth. The remaining dentition is natural and in a healthy state of repair. A gunshot wound is present at the left face, described below. The neck, chest, abdomen, and back are intact. A gunshot wound is present at the posterior neck, described below. A 5.0 cm x 2.0 cm contusion is present at the right lateral neck. A 2.5 cm x 1.0 cm contusion is present at the anterior neck. A 4.0 cm x 1.0 cm contusion is present at the right clavicle. A 3.0 cm x 2.0 cm contusion is present over the left clavicle. Three patterned abrasions are present over the anterior neck, measuring 1.0 cm x 0.2 cm, 3.0 cm x 0.3-0.1 cm, and 1.2 cm x 0.2 cm. A 2.5 cm x 1.0 cm contusion is present at the left upper chest. The arms, hands, legs, and feet are intact. At examination, the hands are covered with a white bag. The bags are removed and discarded per office protocol. There is blood smear on the hands. There is no visible soot on the hands. A gunshot wound is present at the left hand, described below. The left arm is remarkable for a 0.7 cm x 0.2 cm abrasion and a 2.0 cm x 0.5 cm contusion at the left hand. The right arm and lower extremities are atraumatic.

MARKS OF THERAPY: None.

SIGNS OF ORGAN DONATION: None.

SCARS: Well-healed scars of the right shoulder, upper extremity, and left lower extremity.

TATTOOS: As per autopsy photographs.

X-RAYS: Skeletal survey reveals a projectile at the left maxillary region and right clavicular region.

HISTORY: Shot by law enforcement following a police pursuit. Pronounced dead on scene.

PATHOLOGICAL DIAGNOSES:

1. Penetrating, indeterminate range gunshot wound to the posterior neck (A), centered 6" from the top of the head, 0.75" left of posterior midline. The entrance wound consists of a 1.5 cm x 0.7 cm, round defect, with a 0.1 cm circumferential abrasion margin. There is no soot or stippling on the surrounding skin surface. The trajectory is forward and slightly rightward. A 1.5 cm x 1.5 cm, deformed, jacketed projectile is located within the maxillary sinus and submitted as evidence. The wound path involves the C1 and C2 vertebrae (fractured), partial transection of the spinal cord, pharyngeal soft tissues, maxillary sinus where the projectile terminates its path.
2. Penetrating, indeterminate range gunshot wound to the left face (F), centered 5.5" from the top of the head, 5" left of anterior midline. The entrance wound consists of a 2.0 cm x 1.0 cm, ovoid defect, with a 0.2 cm laceration at the 5 o'clock position, a 0.5 cm laceration at the 6 o'clock position, and an abrasion margin, measuring 0.1 cm thick between the 9 o'clock to 3 o'clock positions. There is no soot or stippling on the surrounding skin surface. The trajectory is to the right and downward. A 0.8 cm x 0.5 cm, jacketed, deformed projectile is recovered from the right clavicle, 14" from the top of the head, 1" right of anterior midline, and is submitted as evidence. The wound path involves fracture of the left mandible and associated teeth, and injury to the pharyngeal soft tissues, thyrohyoid muscle, sternothyroid muscle, and right clavicle, where the bullet terminates its path. Associated subcutaneous hemorrhage and contusions at the anterior neck.

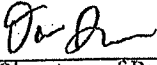
Cause of Death: Gunshot wound to neck.

Final Report: February 11, 2021

The facts stated herein are true and correct to the best of my knowledge and belief.

02/12/2021
Date Signed

Richmond City
Place of Autopsy


Signature of Pathologist
Daniel Shapiro, M.D.



Autopsy C0021-21
File# C2021-73266
Date/Day 01/11/2021, Monday
Time 09:00 a.m.

REPORT OF AUTOPSY # C0021-21
Page 2

DECEDENT Xzavier Hill

3. Perforating, indeterminate range gunshot wound to the left hand, with entrance (E) adjacent to the base of the thumb, centered 23.5" from the top of the shoulder and 2.25" left of posterior midline of the arm. The entrance wound consists of a 0.8 cm x 0.8 cm, round defect. There is no soot or stippling on the surrounding skin surface. The trajectory is dorsal to ventral, lateral to medial, and slightly distal. An exit wound is present at the palmar surface of the left hand (B). The exit wound consists of a 2.5 cm x 1.0 cm defect, 24" from the top of the shoulder and 2.5" left of anterior midline, with three lacerations (0.6 cm, 0.5 cm, and 0.5 cm) at the 3 o'clock to 7 o'clock position. A re-entrance wound (C) is present at the palmar surface of the left hand, 25" from the top of the shoulder, 0.5" right of anterior midline. The re-entrance wound consists of a 3.2 cm x 1.3 cm, irregular defect with a 1 cm laceration at the 12 o'clock position. A re-exit wound (D), is present at the left medial aspect of the fourth digit, consisting of a 2.0 cm x 0.7 cm, irregular defect, situated 25.5" from the top of the shoulder and 1" right of anterior midline. There are no recoverable projectile fragments. The wound path is associated with fracture of the left fourth proximal phalange.
4. Additional findings.
 - a. Pulmonary vascular congestion, mild.
 - b. Accessory spleen.
5. Toxicology findings.
 - a. 11-Hydroxy Delta-9 THC- 6.1 ng/mL (iliac blood).
 - b. Delta-9 Carboxy THC- 120 ng/mL (iliac blood).
 - c. Delta-9 THC- 21 ng/mL (iliac blood).

DS

REPORT OF AUTOPSY # C0021-20

Page 3

GROSS DESCRIPTION

SEROUS CAVITIES: The pleural and pericardial spaces are intact and without abnormal fluid collections. The abdominal cavity is predominately smooth without adhesions or abnormal fluid collections. The organs are in their usual anatomic locations.

HEART: The heart weighs 417 grams. The epicardial surface is smooth, glistening, and intact. There is no atherosclerosis. The coronary arteries arise and distribute normally. The valves are normally formed and within normal limits. The myocardium is diffusely maroon, intact, and without hemorrhage, necrosis, or scar. The left ventricle, septum, and right ventricle measure 1.3 cm, 1.5 cm, and 0.5 cm, respectively.

AORTA: The aorta arises and distributes normally. There is no atherosclerosis throughout the aorta.

NECK ORGANS: Hemorrhage is present at the thyrohyoid and sternothyroid muscles, associated with a gunshot wound track. The hyoid bone and laryngeal cartilages are intact and without injury. The thyroid gland is symmetric and without focal lesions.

LUNGS: The right lung weighs 422 grams, while the left is 325 grams. The upper airways are intact and contain a scant amount of mucus. The pleural surfaces are smooth and intact with reticular anthracosis. The parenchyma is moderately congested with minimal edematous fluid. There are no mucus plugs. The pulmonary vasculature is free of thromboembolus.

LYMPH NODES: Within normal limits.

LIVER: 1,363 grams. Intact capsule covering a maroon parenchyma. The cut surfaces show no focal lesions.

GALLBLADDER: The gallbladder is present and contains approximately 10 mL of bile. There are no stones or mucosal lesions.

SPLEEN: 115 grams. The capsule is intact. The parenchyma is maroon and without focal lesions. A 1.5 cm x 0.5 cm accessory spleen is adjacent to the spleen.

PANCREAS: Tan, lobulated, and intact without focal lesions.

ADRENAL GLANDS: Intact and without hemorrhage.

GI TRACT: Tongue is intact and shows no injury. Esophagus is intact and shows no mucosal lesions. The stomach is of the usual configuration and contains scant brown chyme. There are no pills or fragments seen. The small and large bowels are intact and without injuries. The appendix is present and unremarkable.

KIDNEYS: The right is 124 grams, while the left kidney is 112 grams. The capsules strip with ease to reveal regular, smooth contours. The renal parenchyma is red-maroon with no focal lesions. The pelves and ureters are intact and without obstruction.

BLADDER: The bladder contains approximately 50 cc of clear, yellow urine. The mucosa is intact and without lesions.

GENITALIA: Internal genitalia are intact and without injury.

BRAIN & MENINGES: The brain weighs 1,483 grams. The dura mater is intact. No evidence of epidural, subdural, or subarachnoid hemorrhages. The leptomeninges are thin and delicate. Serial coronal sections through the cerebral hemispheres demonstrate no evidence of intraparenchymal hemorrhage or focal lesions. The lateral ventricles are of the usual caliber. Serial transverse sections through the brainstem and cerebellum are unremarkable. The spinal cord at the level of the C1 and C2 vertebrae is partially transected, and hemorrhagic. Intraventricular hemorrhage is not present. There is no fluid in the sphenoid sinuses. There is no significant atherosclerosis present in the Circle of Willis.

MUSCULOSKELETAL: Fractures of the left fourth proximal phalange, C1 and C2 vertebrae, and left mandible. No additional bone or joint abnormalities are seen. Skeletal muscle is red-maroon and moist with a mass appropriate for the decedent's age and sex.

MICROSCOPIC SECTIONS: Heart, lung, liver, kidney.

OTHER LAB PROCEDURES: Photo ☒ Micro ☒ Toxicology ☒ X-Ray ☒ Fingerprints ☒ Dental ☐ DNA ☒ GSR ☒
PERK ☐ HIV ☐ Hepatitis ☐ Bacteriology ☐ Virology ☐ Accelerants ☐ Other ☐

DISPOSITION OF EVIDENCE:

TOXICOLOGY (NMS) – Blood.
OCME – Vitreous, blood, liver, bile, urine.
INVESTIGATOR – Projectiles, DNA card, GSR kit, clothing and personal effects.
FUNERAL HOME – None.

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OS

REPORT OF AUTOPSY # C0021-20

Page 4

MICROSCOPIC DESCRIPTION:

HEART: No significant histopathologic abnormality.

LUNG: Mild pulmonary vascular congestion, intra-alveolar and bronchial erythrocyte accumulation (hemoaspiration), and mild alveolar macrophage accumulation.

LIVER: No significant histopathologic abnormality.

KIDNEY: No significant histopathologic abnormality.

SUMMARY:

The decedent was an 18-year-old male who was involved in a vehicular pursuit with police and was subsequently shot during the incident. He was pronounced dead at the scene.

The examination showed gunshot wounds involving the face, neck and left hand. The gunshot wound to the neck was associated with lethal injury. There was no significant natural disease.

Postmortem toxicology revealed metabolites of marijuana and nicotine, which did not contribute to death.

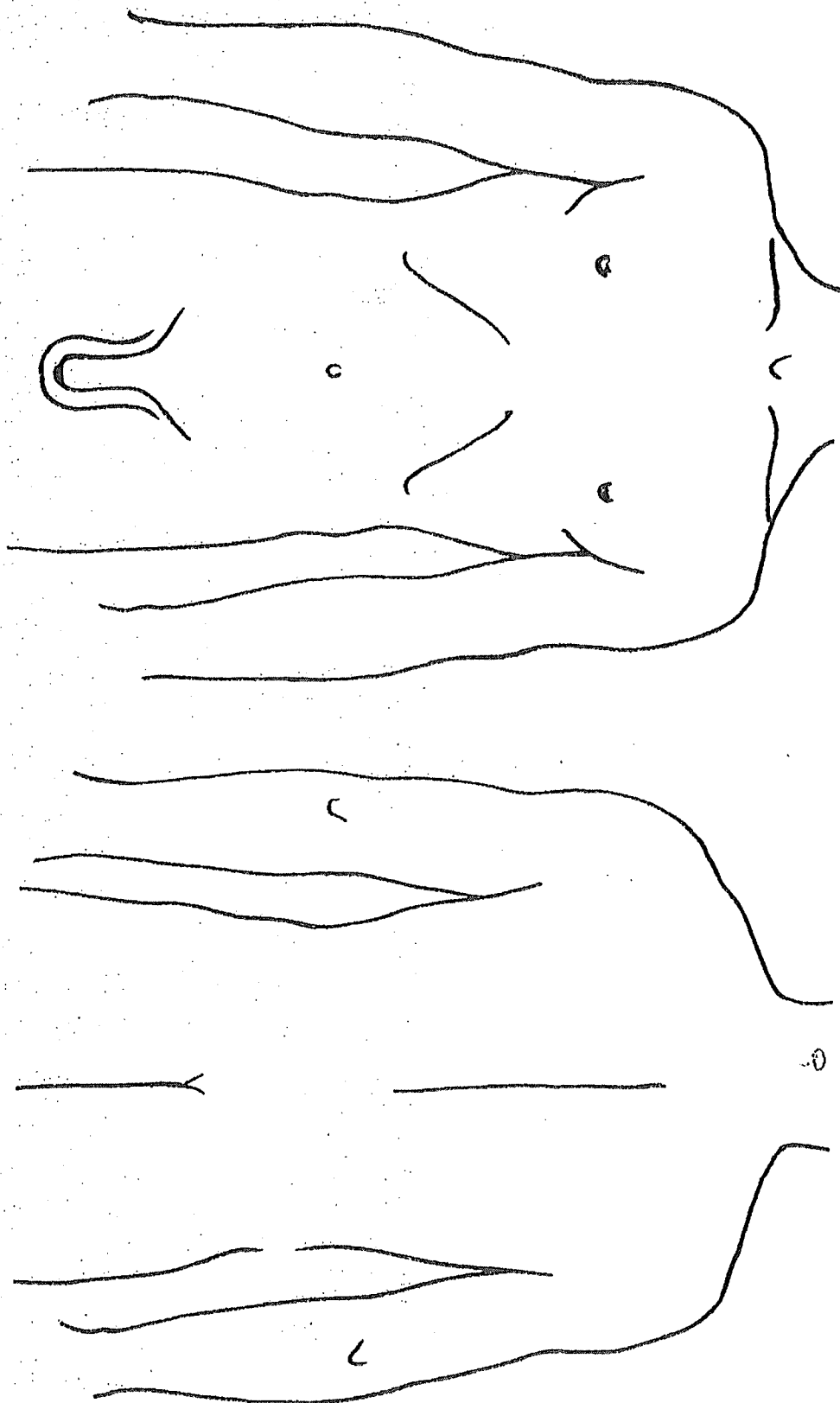
CAUSE OF DEATH:

Gunshot wound to the neck.

MANNER OF DEATH:

Homicide.

at
00



Entire # 1.5X6.7cm and defect 6" FTOH, 3 1/4" LPM 0.1cm Abdomen (much like a small)

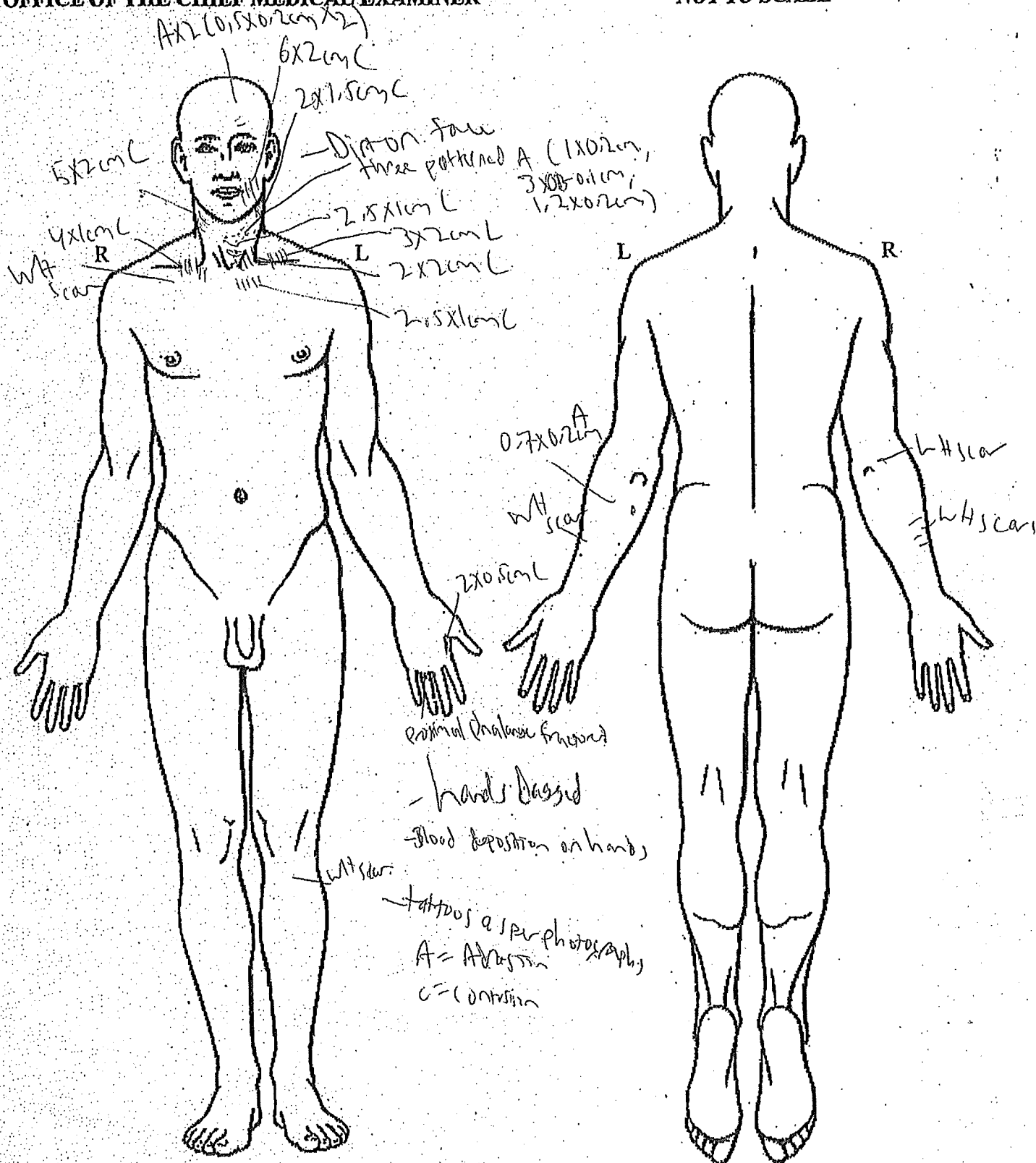
Thoracic abdominal, male, anterior and posterior views.

Name — XZAVIER HILL
 C0021-21 JANUARY 11, 2021
 VSP-GOOCHLAND
 Age — C2021-73266 DS/JG

Autopsy No. _____
 Date / /

**COMMONWEALTH OF VIRGINIA
OFFICE OF THE CHIEF MEDICAL EXAMINER**

NOT TO SCALE



C0021-21 JANUARY 11, 2021
XZAVIER HILL
VSP-GOOCHLAND
C2021-73266 DS/JG

C0021-21 JANUARY 11, 2021

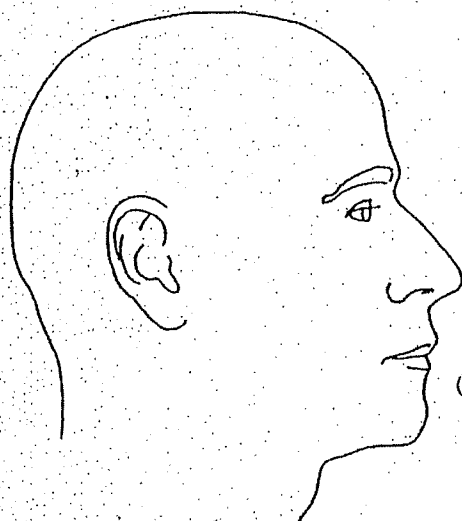
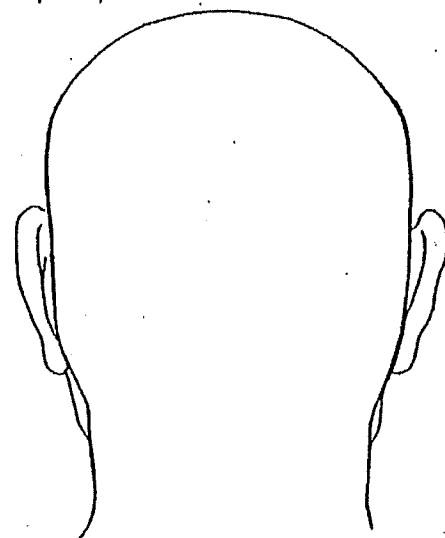
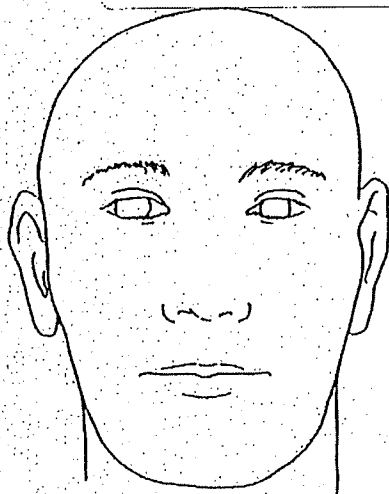
Name — XZAVIER HILL

VSP-GOOCHLAND

Age — C2021-73266 DS/JG

Autopsy No. _____

Date / /

E Entrance

5.5" FTH

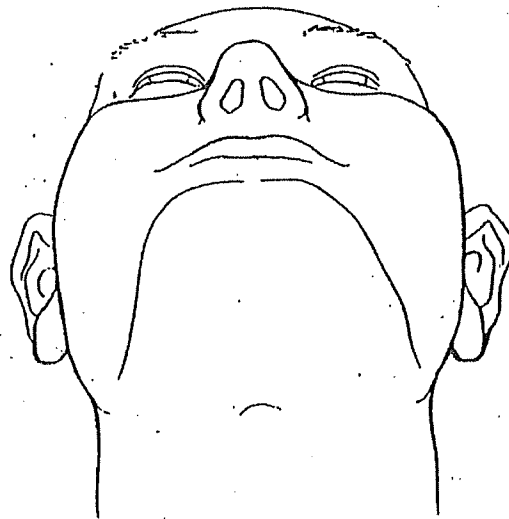
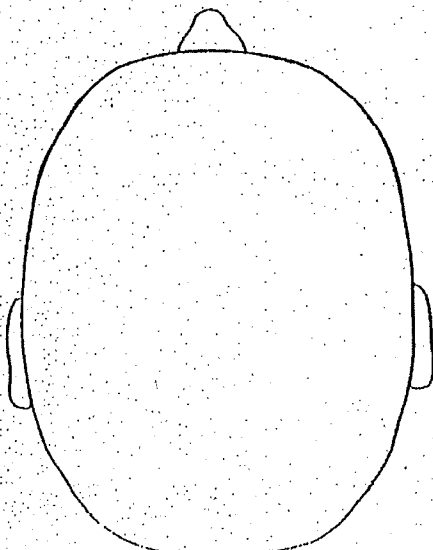
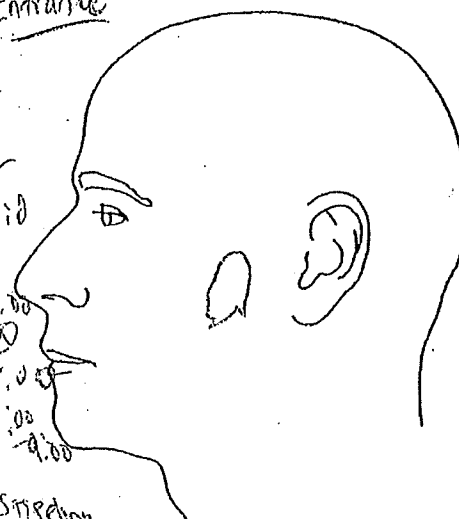
5" LAML

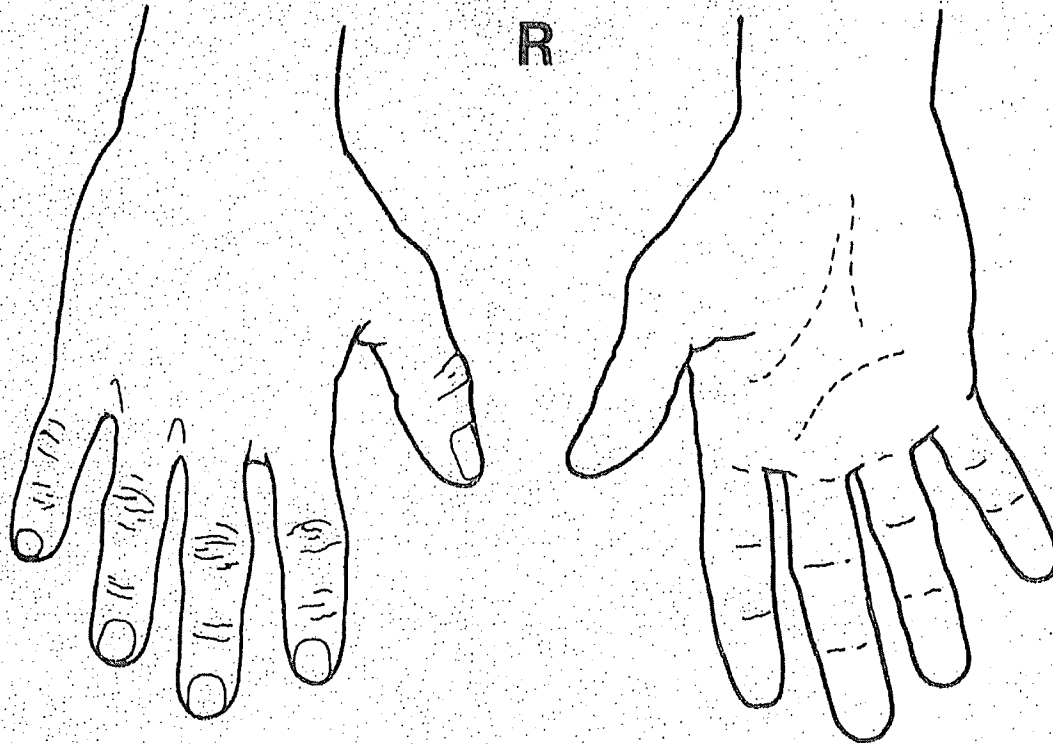
2 x 1 cm void

0.2 cm @

0.5 cm @

Circumf A = 0.1 cm 7.00

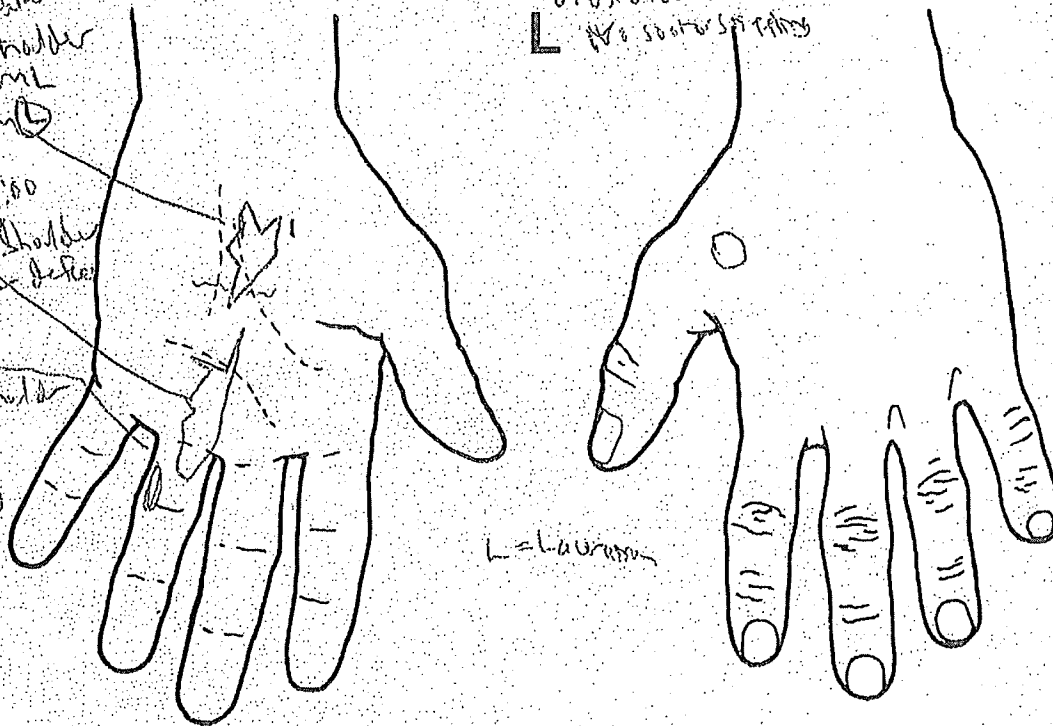
No scar or stippling
A = Abrasion



Entran - E

23.5" FTD shoulder 2.25" LPMH
0.8x0.8cm round defect
L No sutures or staples

B Exit
2.5 X long Volar defect
2.4" FTD shoulder
0.25" LAML
0.6cm, 0.5cm
0.5" FTD
0.5" FTD @ 3:00
The entrance
2.5" FTD shoulder
3.2 x 1.3 cm irregular defect
0.5" FTD
0.5" FTD @ 12:00
Decent D
2.5" FTD shoulder
1" MAML
2 x 0.7cm Volar defect



L = Laceration



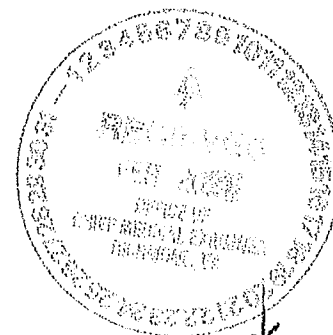
NMS Labs

200 Welsh Road, Horsham, PA 19044-2208
Phone: (215) 657-4900 Fax: (215) 657-2972
e-mail: nms@nmslabs.com

Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

CONFIDENTIAL

DS/5g



Toxicology Report

Report Issued 01/30/2021 10:01

To: 10188
Office of the Chief Medical Examiner-Central
400 East Jackson Street
Richmond, VA 232193694

Patient Name HILL, XZAVIER
Patient ID C2021-73266
Chain 21014234
Age 18 Y DOB 06/12/2002
Gender Male
Workorder 21014234

Page 1 of 3

Positive Findings:

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>Matrix Source</u>
Cotinine	Positive	ng/mL	001 - Iliac Blood
11-Hydroxy Delta-9 THC	6.1	ng/mL	001 - Iliac Blood
Delta-9 Carboxy THC	120	ng/mL	001 - Iliac Blood
Delta-9 THC	21	ng/mL	001 - Iliac Blood

See Detailed Findings section for additional information

Testing Requested:

<u>Analysis Code</u>	<u>Description</u>
8052B	Postmortem, Expanded, Blood (Forensic)

Specimens Received:

<u>ID</u>	<u>Tube/Container</u>	<u>Volume/ Mass</u>	<u>Collection Date/Time</u>	<u>Matrix Source</u>	<u>Labeled As</u>
001	Clear Vial	14 mL	01/11/2021 10:00	Iliac Blood	C2021-73266
002	Clear Plastic Bag	Not Given	Not Given	Shipping Container	Not Applicable

All sample volumes/weights are approximations.
Specimens received on 01/13/2021.

NMS v.21.0

DJ





CONFIDENTIAL

Workorder 21014234
Chain 21014234
Patient ID C2021-73266

Page 2 of 3

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Cotinine	Positive	ng/mL	200	001 - Iliac Blood	LC/TOF-MS
11-Hydroxy Delta-9 THC	6.1	ng/mL	1.0	001 - Iliac Blood	LC-MS/MS
Delta-9 Carboxy THC	120	ng/mL	5.0	001 - Iliac Blood	LC-MS/MS
Delta-9 THC	21	ng/mL	0.50	001 - Iliac Blood	LC-MS/MS

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. 11-Hydroxy Delta-9 THC (Active Metabolite) - Iliac Blood:

11-Hydroxy Delta-9 THC is an active intermediate metabolite of tetrahydrocannabinol (THC) the active component of marijuana. Usual peak levels: Less than 10% of THC levels after smoking.

2. Cotinine (Nicotine Metabolite) - Iliac Blood:

Cotinine is a metabolite of nicotine and may be encountered in the fluids and tissues of an individual as a result of tobacco exposure.

Anabasine is a natural product occurring in tobacco, but not in pharmaceutical nicotine and a separate test for anabasine in urine can be used to distinguish tobacco from pharmaceutical nicotine use.

The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

3. Delta-9 Carboxy THC (Inactive Metabolite) - Iliac Blood:

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10 - 101 ng/mL attained 32 to 240 minutes after beginning smoking, with a slow decline thereafter. The ratio of whole blood concentration to plasma concentration is unknown for this analyte. THCC may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

4. Delta-9 THC (Active Ingredient of Marijuana) - Iliac Blood:

Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. It rapidly leaves the blood, even during smoking, falling to below detectable levels within several hours. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC and may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users.

THC concentrations in blood are usually about one-half of serum/plasma concentrations. Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50 - 270 ng/mL at 6 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) months from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

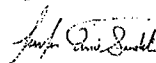
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Workorder 21014234
 Chain 21014234
 Patient ID C2021-73266

Page 3 of 3

Workorder 21014234 was electronically
 signed on 01/30/2021 09:38 by:



Jennifer L. Turri Swatek, M.S.F.S., D-ABFT-FT
 Certifying Scientist

Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Acode 52198B - Cannabinoids Confirmation, Blood - Iliac Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
11-Hydroxy Delta-9 THC	1.0 ng/mL	Delta-9 THC	0.50 ng/mL
Delta-9 Carboxy THC	5.0 ng/mL		

Acode 8052B - Postmortem, Expanded, Blood (Forensic) - Iliac Blood

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Barbiturates	0.040 mcg/mL	Gabapentin	5.0 mcg/mL
Cannabinoids	10 ng/mL	Salicylates	120 mcg/mL

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnotosedatives, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

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